

Listing of Claims:

1.(Currently Amended) A method (~~200, 300, 400~~) for determining a candidate cell for ~~an~~ one of a first active set and a second active set, where ~~[[-]]~~ the method comprising:

determining a quality factor of for each cell in the an active set for which the candidate cell is to be determined (~~202~~)~~[[,]]~~;

~~[[-]]~~ determining the a quality factor of a test cell; is determined (~~203~~), ~~and~~ .

~~[[-]]~~ accepting the test cell is accepted (~~205~~) as a candidate cell for the active set for which the candidate cell is to be determined, if an acceptance criterion, which defines a value as a limit for accepting a the test cell, is fulfilled~~[[,~~ characterized in that the~~]]~~;

selecting the acceptance criterion is selected (~~201~~) so that ~~in~~ within the acceptance criterion a first limit value is equal to a second limit value multiplied ~~with~~ by a finite number~~[[,]]~~;

wherein said first limit value is for a certain first quality factor of ~~a~~ the test cell and for a certain first set of quality factors, consisting of quality factors of cells in ~~a~~ the first active set, said second limit value is for a certain second quality factor of ~~a~~ the test cell and for a certain second set of quality factors, consisting of quality factors of cells in ~~a~~ the second active set, and the first quality factor is equal to the second quality factor multiplied with the ~~same~~ finite number and the first set of quality factors is ~~the same as~~ identical to a set formed of the quality factors belonging to the second set of quality factors multiplied ~~with the same~~ by the finite number.

2. (Currently Amended) ~~A~~ The method according to of claim 1, ~~characterized in that~~ wherein said acceptance criterion involves a function, whose value depends at least on quality factors of first cells in the active set for which the candidate cell is to be determined and on certain parameter values, and ~~in that~~ wherein said acceptance criterion produces a the first limit value for said first quality factor of ~~a~~ the test cell, said first set of quality factors and first parameter values, which first limit value is equal to a second limit value multiplied ~~with~~ by the finite number, said second limit value being for said second quality factor of ~~a~~ the test cell, said

second set of quality factors and said first parameter values, said first parameter values being any parameter values.

3. (Currently Amended) A The method ~~(300, 400) according to~~ of claim 1, ~~characterized in that~~ wherein ~~[[-]]~~ the quality factor of the test cell and the quality factors of the cells in the active set for which the candidate cell is to be determined are normalized ~~(301)~~ with a number having a predefined relative value compared to the values of the quality factors of the cells in the active set for which the candidate cell is to be determined, ~~[[- a]]~~ the value for the limit is determined ~~(302)~~ using the normalized quality factors of the cells in the active set for which the candidate cell is to be determined and the normalized quality factor of the test cell and ~~[[-]]~~ the test cell is accepted ~~(303, 205)~~ as a candidate cell, if the acceptance criterion is fulfilled.

4. (Currently Amended) A The method ~~(300, 400) according to~~ of claim 3, ~~characterized in that~~ wherein the quality factors are normalized using ~~the~~ a largest quality factor of the quality factors of the cells in the active set for which the candidate cell is to be determined.

5. (Currently Amended) A The method ~~(300, 400) according to~~ of claim 3, ~~characterized in that~~ wherein the quality factors are normalized using ~~the~~ a smallest quality factor of the quality factors of the cells in the active set for which the candidate cell is to be determined.

6. (Currently Amended) A The method ~~(300, 400) according to~~ of claim 3, ~~characterized in that~~ wherein the quality factors are normalized using ~~the~~ an average quality factor of the quality factors of the cells in the active set for which the candidate cell is to be determined.

7. (Currently Amended) A The method ~~(400) according to~~ of claim 1, ~~characterized in that~~ wherein the acceptance criterion is such that for ~~an~~ the active set for which the candidate cell is to be determined and where all the cells have a certain quality factor, the limit is that certain quality factor.

8. (Currently Amended) A The method ~~according to~~ of claim 1, ~~characterized in that~~ wherein the method is executed periodically.

9. (Currently Amended) A ~~The~~ method ~~according to~~ of claim 1, ~~characterized in that~~ wherein the method is triggered by a certain event.

10. (Currently Amended) A ~~The~~ method ~~according to~~ of claim 1, ~~characterized in that~~ wherein the candidate cell is added to the active set for which the candidate cell is to be determined.

11. (Currently Amended) A ~~The~~ method ~~according to~~ of claim 1, ~~characterized in that~~ wherein the cell having ~~the~~ a worst quality factor in the active set for which the candidate cell is to be determined is replaced with the candidate cell.

12. (Currently Amended) A method for determining a cell to be removed from ~~the~~ one of a first active set and a second active set, ~~where~~ comprising:

[[~~-~~]] ~~determining a~~ the quality factor ~~of~~ for each cell in ~~the~~ an active set from which the cell is to be removed is determined[[,]];

[[~~-~~]] ~~evaluating a rejection criterion is evaluated~~ using the cell having ~~the~~ a smallest quality factor as a test cell and a temporary set, which contains ~~the~~ cells of the active set from which the cell is to be removed except the cell having the smallest quality factor[[, and]];

[[~~-~~]] ~~removing the test cell is removed~~ from the active set from which the cell is to be removed, if a rejection criterion, which defines a value as a limit for rejecting a the test cell, is fulfilled[[, characterized in that]]; and

selecting the rejection criterion ~~is selected~~ so that ~~in~~ within the rejection criterion a first limit value is equal to a second limit value multiplied ~~with~~ by a finite number[[,]];

wherein said first limit value is for a certain first quality factor of a test cell and for a certain first set of quality factors, consisting of quality factors of cells in a first temporary set, which contains the cells of the first active set except the cell of the first active set having the smallest quantity factor, and the second limit value is for a certain second quality factor of a test cell and for a certain second set of quality factors, consisting of quality factors of cells in a second

temporary set, which contains the cells of the second active set except the cell of the second active set having the smallest quantity factor, and the first quality factor is equal to the second quality factor multiplied ~~with the same~~ by the finite number and the first set of quality factors is ~~the same as~~ identical to a set formed of the quality factors belonging to the second set of quality factors multiplied ~~with the same~~ by the finite number.

13. (Currently Amended) A The method according to ~~of~~ claim 12, ~~characterized in that~~ wherein said rejection criterion involves a function, whose value depends at least on quality factors of first cells in the temporary set and on certain parameter values, and ~~in that~~ wherein said rejection criterion produces a the first limit value for said first quality factor of a the test cell, said first set of quality factors and first parameter values, which first limit value is equal to a the second limit value multiplied ~~with~~ by the same finite number, the second limit value being for said second quality factor of a the test cell, said second set of quality factors and said first parameter values, said first parameter values being any parameter values.

14. (Currently Amended) An arrangement ~~(500)~~ for determining a candidate cell for one of a first an active set and a second active set, comprising:

[[-]] means ~~(501)~~ for determining a quality factor for a test cell; and

[[-]] means ~~(502)~~ for determining quality factors for ~~the~~ cells in the active set for which the candidate cell is to be determined[[,]]; ~~characterized in that it further comprises~~

[[-]] means ~~(503)~~ for selecting an acceptance criterion, which defines a value as a limit for accepting a the test cell and in which a first limit value is equal to a second limit value multiplied ~~with~~ by a finite number, ~~wherein~~ said first limit value is being for a certain first quality factor of a the test cell and for a certain first set of quality factors, consisting of quality factors of cells in a the first active set, the second limit value is being for a certain second quality factor of a the test cell and for a certain second set of quality factors, consisting of quality factors of cells in a the second active set, and the first quality factor is being equal to the second quality factor multiplied ~~with~~ by the same finite number and the first set of

quality factors ~~is the same as~~ being identical to a set formed of the quality factors belonging to the second set of quality factors multiplied ~~with the same~~ by the finite number; and

[[-]] means ~~(504)~~ for deciding about the acceptance of the test cell as a candidate cell for the active set for which the candidate cell is to be determined using the acceptance criterion.

15. (Currently Amended) ~~An~~ The arrangement ~~according to~~ of claim 14, ~~characterized in that~~ wherein said acceptance criterion involves a function, whose value depends at least on quality factors of first cells in the active set for which the candidate cell is to be determined and on certain parameter values, and ~~in that~~ wherein said acceptance criterion produces a first limit value for said first quality factor of a the test cell, said first set of quality factors and first parameter values, which first limit value is equal to a the second limit value multiplied ~~with~~ by the finite number, the second limit value being for said second quality factor of a the test cell, said second set of quality factors and said first parameter values, said first parameter values being any parameter values.

16. (Currently Amended) A mobile station ~~(510)~~, comprising:

[[-]] means ~~(501)~~ for determining a quality factor for a test cell; ~~and~~

[[-]] means (502) for determining quality factors for ~~the~~ cells in one of a ~~the~~ first active set and a second active set[[,characterized in that it further comprises]];

[[-]] means ~~(503)~~ for selecting an acceptance criterion, which defines a value as a limit for accepting a the test cell and in which a first limit value is equal to a second limit value multiplied ~~with~~ by a finite number, ~~wherein~~ said first limit value ~~is being~~ for a certain first quality factor of a the test cell and for a certain first set of quality factors, consisting of quality factors of cells in a the first active set, the second limit value ~~is being~~ for a certain second quality factor of a the test cell and for a certain second set of quality factors, consisting of quality factors of cells in a the second active set, and the first quality factor ~~is being~~ equal to the second quality factor multiplied ~~with~~ by the same finite number and the first set of

quality factors ~~is the same as~~ being identical to a set formed of a quality factors belonging to the second set of quality factors multiplied ~~with the same~~ by the finite number; and

[[-]] means ~~(504)~~ for deciding about the acceptance of the test cell as a candidate cell for the active set for which the candidate cell is to be determined using the acceptance criterion.

17. (Currently Amended) A ~~The mobile station according to~~ of claim 16, ~~characterized in that wherein~~ said acceptance criterion involves a function, whose value depends at least on quality factors of first cells in the active set for which the candidate cell is to be determined and on certain parameter values, and ~~in that wherein~~ said acceptance criterion produces a the first limit value for said first quality factor of a the test cell, said first set of quality factors and first parameter values, which first limit value is equal to a the second limit value multiplied ~~with by~~ the finite number, the second limit value being for said second quality factor of a the test cell, said second set of quality factors and said first parameter values, said first parameter values being any parameter values.

18. (Currently Amended) A ~~The mobile station according to~~ of claim 16, ~~characterized in that it said mobile station~~ is a mobile station of an Universal Mobile Communication System.

19. (Currently Amended) A network element ~~(520)~~₁ comprising:

[[-]] means ~~(501)~~ for determining a quality factor for a test cell; ~~and~~

[[-]] means (502) for determining quality factors for ~~the~~ cells in the one of a first active set and a second active set[[, characterized in that it further comprises]];

[[-]] means ~~(503)~~ for selecting an acceptance criterion, which defines a value as a limit for accepting a the test cell and in which a first limit value is equal to a second limit value multiplied ~~with by~~ a finite number, ~~wherein~~ said first limit value ~~is being~~ for a certain first quality factor of a the test cell and for a certain first set of quality factors, consisting of quality factors of cells in a the first active set, said second limit value ~~is being~~ for a certain second quality factor of a the test cell and for certain second set of quality factors, consisting of quality factors of

cells in a the second active set, and the first quality factor is equal to the second quality factor multiplied ~~with the same~~ by the finite number and the first set of quality factors ~~is the same as~~ being identical to a set formed of the quality factors belonging to the second set of quality factors multiplied ~~with the same~~ by the finite number; and

[[~~-~~]] means ~~(504)~~ for deciding about the acceptance of the test cell as a candidate cell for the active set for which the candidate cell is to be determined using the acceptance criterion.

20. (Currently Amended) A The network element ~~according to~~ of claim 19, ~~characterized in that it~~ wherein the network element is a network element of ~~the~~ a radio access network of ~~the~~ an Universal Mobile Communication System.

21. (Currently Amended) A The network element ~~according to~~ of claim 20, ~~characterized in that it~~ wherein the network element is a Radio Network Controller.

22. (Currently Amended) A The network element ~~according to~~ of claim 19, ~~characterized in that~~ wherein said acceptance criterion involves a function, whose value depends at least on quality factors of first cells in the active set for which the candidate cell is to be determined and on certain parameter values, and ~~in that~~ wherein said acceptance criterion produces a the first limit value for said first quality factor of a the test cell, said first set of quality factors and first parameter values, which first limit value is equal to a the second limit value multiplied ~~with~~ by the finite number, the second limit value being for said second quality factor of a the test cell, said second set of quality factors and said first parameter values, said first parameter values being any parameter values.

23. (New) An apparatus, comprising:

a test cell block configured to determine a quality factor for a test cell;

an active cell block configured to determine quality factors for cells in one of a first active set and a second active set;

an acceptance criterion block configured to select an acceptance criterion, which defines a value as a limit for accepting the test cell and in which a first limit value is equal to a second limit value multiplied by a finite number, said first limit value being for a certain first quality factor of the test cell and for a certain first set of quality factors, consisting of quality factors of cells in the first active set, said second limit value being for a certain second quality factor of the test cell and for a certain second set of quality factors, consisting of quality factors of cells in the second active set, and the first quality factor being equal to the second quality factor multiplied by the finite number and the first set of quality factors being identical to a set formed of the quality factors belonging to the second set of quality factors multiplied by the finite number; and

a decision block configured to decide whether to accept the test cell as a candidate cell for the active set for which the candidate cell is to be determined using the acceptance criterion.

24. (New) A method, comprising:

determining a quality factor for each cell in one of a first active set and a second active set;

determining a quality factor of a test cell; and

accepting the test cell as a candidate cell for an active set for which the candidate cell is to be determined, if an acceptance criterion, which defines a value as a limit for accepting the test cell, is fulfilled;

wherein the acceptance criterion is selected so that within the acceptance criterion a first limit value is equal to a second limit value multiplied by a finite number, said first limit value being for a certain first quality factor of the test cell and for a certain first set of quality factors, consisting of quality factors of cells in the first active set, said second limit value being for a certain second quality factor of a test cell and for a certain second set of quality factors, consisting of quality factors of cells in the second active set, and said first quality factor being equal to the second quality factor multiplied by the finite number and the first set of

quality factors being identical to a set formed of the quality factors belonging to the second set of quality factors multiplied by the finite number.